



PATENT  
1906-119P

IN THE U.S. PATENT AND TRADEMARK OFFICE

Applicant: Soroush GHANBARI et al. Conf.:  
Appl. No.: 10/628,385 Group:  
Filed: July 29, 2003 Examiner:  
For: METHOD AND APPARATUS FOR COMPENSATING  
FOR ERRONEOUS MOTION VECTORS IN IMAGE  
AND VIDEO DATA

INFORMATION DISCLOSURE STATEMENT  
(SUBMISSION AFTER FILING OF AN APPLICATION  
BUT BEFORE FINAL REJECTION OR NOTICE OF ALLOWANCE  
OR CONCURRENTLY WITH A RULE 1.114 RCE APPLICATION)

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

December 15, 2003

Sir:

Pursuant to 37 C.F.R. §§ 1.97 and 1.98, applicant(s) hereby submit(s) an Information Disclosure Statement for consideration by the Examiner.

I. LIST OF PATENTS, PUBLICATIONS OR OTHER INFORMATION

The patents, publications, or other information submitted for consideration by the Office are listed on the PTO-1449(s), attached hereto.

II. COPIES (check at least one box)

- a. ☐ This application was filed before June 30, 2003. Accordingly, submitted herewith is a legible copy of (i) each U.S. and foreign patent; (ii) each publication or that portion which caused it to be listed; and (iii) all other information or that portion which caused it to be listed.
- b. ☒ This application was filed on or after June 30, 2003. Accordingly, copies of cited U.S. patents and patent application publications therefore are not included. Copies of foreign

patent documents and non-patent literature are included.

- c. ☐ Some or all of the documents listed on the PTO-1449 are not enclosed because they were cited in the International Search Report and copies should already be in the PTO file. If copies are needed, please contact the undersigned.

III. CONCISE EXPLANATION OF THE RELEVANCE  
(check at least one box)

- a. ☒ **DOCUMENTS IN THE ENGLISH LANGUAGE**

The patents, publications, or other information listed on the attached PTO 1449 are in the English language and therefore, do not require a statement of relevancy.

- b. ☐ **DOCUMENTS NOT IN THE ENGLISH LANGUAGE**

A concise explanation of the relevance of all patents, publications, or other information listed that is not in the English language is as follows:

- c. ☐ **ENGLISH LANGUAGE SEARCH REPORT**

An English language version of the search report or action that indicates the degree of relevance found by the foreign office is attached, thereby satisfying the requirement for a concise explanation. See MPEP 609(III)(A)(3).

- d. ☐ **OTHER**

The following additional information is provided for the Examiner's consideration.

FEES

IV. ☒ THIS IDS IS BEING FILED UNDER 37 C.F.R. § 1.97(b):  
(check one box)

- a. ☐ within three months of the filing date of a national application (37 C.F.R. § 1.97(b)(1)). No fee or statement is required. *(This section is not to be used with RCE's.)*
- b. ☐ within three months of the date of entry of the national stage as set forth in § 1.491 in an international application (37 C.F.R. § 1.97(b)(2)). No fee or statement is required.
- c. ☐ concurrently with the filing of a Request for Continued Examination under § 1.114 (37 C.F.R. § 1.97(b)(4)). No fee or statement is required.
- d. ☒ before the mailing date of a first Action on the merits (37 C.F.R. § 1.97(b)(3)). No fee or statement is required.  
In the event that a first Office Action on the merits has been issued, please consider this IDS under 37 C.F.R. § 1.97(c) and see the statement under 37 C.F.R. § 1.97(e) below, or, if no statement has been made, charge our deposit account in the amount of \$180.00 as required by 37 C.F.R. § 1.17(p).

V. ☐ THIS IDS IS BEING FILED UNDER 37 C.F.R. § 1.97(c):  
(check one box)

before the mailing date of a Final Office Action under 37 C.F.R. § 1.113 (See 37 C.F.R. § 1.97(c)(1)) or before the mailing date of a Notice of Allowance under 37 C.F.R. § 1.311 (See 37 C.F.R. § 1.97(c)(2)).

- a. ☐ No statement; therefore, a fee in the amount of \$180.00 as required by 37 C.F.R. § 1.17(p).
- or
- b. ☐ See the statement below. No fee is required.

VI. STATEMENT UNDER 37 C.F.R. § 1.97(e) (check only one box)

The undersigned hereby states that

- a. ☐ each item of information contained in the IDS was first cited in any communication from a foreign Patent Office in a counterpart foreign application not more than three months prior to the filing of this IDS; or
- b. ☐ no item of information contained in the IDS was cited in a communication from a foreign Patent Office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of IDS was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of the IDS.
- c. ☐ Some of the items of information were cited in a communication from a foreign Patent Office. As to this information, the undersigned states that each item of information contained in the IDS was first cited in a communication from a foreign Patent Office in a counterpart foreign application not more than three months prior to the filing of this IDS. As to the remaining information, the undersigned hereby states that no item of this remaining information contained in the IDS was cited in a communication from a foreign Patent Office in a counterpart foreign application and, to the best of my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this statement.

VII. PAYMENT OF FEES (check one box)

- ☐ A check in the amount of \$180.00 as required by 37 C.F.R. § 1.17(p) is enclosed for the above-identified fee.
- ☐ Please charge Deposit Account No. 02-2448 in the amount required by 37 C.F.R. § 1.17(p) for the above-indicated fee. A triplicate copy of this paper is attached.
- ☒ No fee is required.

Appl. No. 10/628,385

If the Examiner has any questions concerning this IDS, he/she is requested to contact the undersigned. If it is determined that this IDS has been filed under the wrong rule, the PTO is requested to consider this IDS under the proper rule and charge the appropriate fee to Deposit Account No. 02-2448.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under § 1.17; particularly, extension of time fees.

Respectfully submitted,

BIRCH, STEWART, KOLASCH & BIRCH, LLP

By 

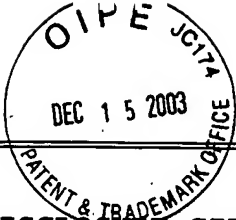
Michael K. Mutter, #29,680

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1906-119P

P.O. Box 747  
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Attachment(s): ☒ PTO-1449  
☒ Documents  
☐ Foreign Search Report  
☐ Fee  
☐ Other:

(Rev. 09/30/03)



Form PTO-1449

**INFORMATION DISCLOSURE CITATION  
IN AN APPLICATION**

(Use several sheets if necessary)

ATTY. DOCKET NO.  
1906-0119PAPPLICATION NO.  
10/628,385APPLICANT  
Soroush GHANBARI et al.FILING DATE  
July 29, 2003

GROUP

**U.S. PATENT DOCUMENTS**

EXAMINER INITIAL	DOCUMENT NUMBER	Kind	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	US 5,910,827	A	1999-06-08	Kwan et al.			
	US 5,541,667	A	1996-07-30	Saito			
	US 5,912,707	A	1999-06-15	Kim			
	US 5,724,369	A	1998-03-03	Brailean et al.			
	US 5,737,022	A	1998-04-07	Yamaguchi et al.			
	US 5,614,958	A	1997-03-25	Shikakura			
	US 5,400,076	A	1995-03-21	Iwamura			

**FOREIGN PATENT DOCUMENTS**

Office	DOCUMENT NUMBER	Kind	DATE	COUNTRY	CLASS	SUB CLASS	TRANSLATION	
							YES	NO
EP	0 727 910	A2	1996-08-21	EUROPE				

**OTHER DOCUMENTS**

(Include Name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.

	Y. WANG et al., "Error Control and Concealment for Video Communication: A Review," Proceedings of the IEEE, Vol. 86, No. 5, May 1998, pages 974-997
	Wen-Jeng CHU et al., "Detection and Concealment of Transmission Errors in H.261 Image," IEEE Transactions, Vol. 8, No. 1, February 1998
	Yao WANG et al., "Maximally Smooth Image Recovery in Transform Coding," IEEE Transactions on Communications, Vol. 41, No. 10, October 1993
	Wenwu ZHU et al., "Second-Order Derivative-Based Smoothness Measure for Error Concealment in DCT-Based Codecs," IEEE Transactions, Vol. 8, No. 6, October 1998
	Wilson KWOK et al., "MULTI-DIRECTIONAL INTERPOLATION FOR SPATIAL ERROR CONCEALMENT," 1993, IEEE, pages 455-460
	Huifang SUN et al., "Concealment of Damaged Block Transform Coded Images Using Projections onto Convex Sets," IEEE, Vol. 4, No. 4, April 1995, pages 470-477
	Mei-Juan CHEN et al., "Error Concealment of Lost Motion Vectors with Overlapped Motion Compensation," IEEE, Vol. 7, No. 3, June 1997, pages 560-563
	Paul HASKELL et al., "RESYNCHRONIZATION OF MOTION COMPENSATED VIDEO AFFECTED BY ATM CELL LOSS," IEEE, 1992, pages III-545 to III-548
	Wai-Man LAM et al., "RECOVERY OF LOST OR ERRONEOUSLY RECEIVED MOTION VECTORS," IEEE, 1993, pages V-417 to V-419
	The Colour Image Processing Handbook, THE VECTOR MEDIAN FILTER, Proceedings of the IEEE, Chapman and Hall, 1990, pages 190-193
	J. CHALIDABHONGSE et al., "FAST MOTION VECTOR ESTIMATION USING MULTIREOLUTION-SPATIO-TEMPORAL CORRELATIONS," IEEE, Vol. 7, No. 3, June 1997, pages 477-488
	Jae-Won SUH et al., "RECOVERY OF MOTION VECTORS FOR ERROR CONCEALMENT," IEEE, 1999, pages 750-753

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with M.P.E.P. 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



Form PTO-1449

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**FOREIGN PATENT DOCUMENTS**

	Office	DOCUMENT NUMBER	Kind	DATE	COUNTRY	CLASS	SUB CLASS	TRANSLATION	
								YES	NO

**OTHER DOCUMENTS**

(Include Name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.)

	Jian ZHANG et al., "VIDEO ERROR CONCEALMENT USING DECODER MOTION VECTOR ESTIMATION," 1997 IEEE TENCON, School of Electrical Eng., The University of New South Wales, pages 777-780
	Dong-Wook KIM et al., "Adaptive motion estimation based on spatio-temporal correlation," Signal Processing: Image Communication, Vol 13, No. 2, August 1, 1998, pages 161-170

EXAMINER

DATE CONSIDERED

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